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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,172	10/22/2003	Ming Gao Yao	12553/97	6517

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EXAMINER

KIM, PAUL D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,172

Applicant(s)

YAO ET AL.

Examiner

Paul D. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/22/03, 2/9/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is a response to the restriction requirement filed on 1/30/2006.

Response to the Restriction Requirement

1. Applicant's election with traverse of Group I, Species A, claims 1-10 and 12-15, in the reply filed on 1/30/2006 is acknowledged. This is not found persuasive because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Applicant cancelled the non-elect claims 17-32 herein.

3. Claims 11 and 16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1/30/2006.

Specification

4. The disclosure is objected to because of the following informalities:

Re. "Brief Description of the Drawings": There are no descriptions for the Fig. 3a-3c, 5a-5e, 6a-6d and 7a-7k.

Appropriate correction is required.

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A SYSTEM FOR MANUFACTURING A HRAD DISC DRIVE SUSPENSION FLEXURE--.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6, 12, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Akin, Jr. et al. (US PAT. 5,796,552).

Akin, Jr. et al. teach a suspension having a conductor trace array comprising: a first electrical trace (60 or 62) to be coupled to a base element, wherein the base element includes an insulative layer (25) and a conductive layer (14), the insulative layer being sandwiched between the first electrical trace and the conductive layer, and the conductive layer including a recess opposite the electrical trace as shown in Fig. 4 (see also col. 5, line 60 to col. 8, line 42).

As per claim 2 the first electrical trace is made of copper.

As per claim 3 the insulative layer is made of polyimide.

As per claim 4 the conductive layer is made of stainless steel.

As per claim 5 the recess is created by an etching process.

As per claim 6 the etching process removes all of the conductive layer directly opposite of the first electrical trace as shown in Fig. 4.

As per claim 12 a second electrical trace (60 or 62) adjacent the first electrical trace, wherein a layer of second insulation material (70) is to be applied between the first electrical trace and the second electrical trace.

As per claim 13 the second insulation material is made of polyimide.

As per claim 15 the second insulation material is between a first and a second read/write electrical trace and is 10 to 15 micrometers in width.

8. Claims 1-5, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiraishi et al. (US PAT. 5,995,329).

Shiraishi et al. teach a head gimbal assembly comprising: a first electrical trace (34a or 34b) to be coupled to a base element, wherein the base element includes an insulative layer (36) and a conductive layer (30), the insulative layer being sandwiched between the first electrical trace and the conductive layer, and the conductive layer including a recess (38) opposite the electrical trace as shown in Figs. 3 and 4 (see also col. 5, line 15 to col. 8, line 64).

As per claim 2 the first electrical trace is made of copper.

As per claim 3 the insulative layer is made of polyimide.

As per claim 4 the conductive layer is made of stainless steel.

As per claim 5 the recess is created by an etching process.

As per claim 12 a second electrical trace (34a or 34b) adjacent the first electrical trace, wherein a layer of second insulation material (37) is to be applied between the first electrical trace and the second electrical trace as shown in Fig. 4.

As per claim 13 the second insulation material is made of polyimide.

9. Claims 1, 5, 7 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al. (US PAT. 6,342,715).

Shimizu et al. teach a semiconductor memory device comprising: a first electrical trace (one of 216) to be coupled to a base element, wherein the base element includes an insulative layer (215) and a conductive layer (211), the insulative layer being sandwiched between the first electrical trace and the conductive layer, and the conductive layer including a recess (212) opposite the electrical trace as shown in Fig. 18 (see also col. 20, line 57 to col. 21, line 22).

As per claim 5 the recess is created by an etching process.

As per claim 7 the recess is to be filled with a first insulation material (213) as shown in Fig. 19.

As per claim 12 a second electrical trace (the other one of 216a) adjacent the first electrical trace, wherein a layer of second insulation material (213) is to be applied between the first electrical trace and the second electrical trace as shown in Fig. 19.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al.

Shimizu et al. teach all of the limitations as set forth above except the first insulation material (as per claim 8) and a thickness (as per claim 10) of the first insulation. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to apply the insulation material as recited in the claimed invention because Applicant has not disclosed that the insulation material as recited in the claimed invention provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with Shimizu et al. because the insulation material as recited in the claimed invention would perform equally well such as electrically insulating property in Shimizu et al. Also, even though Shimizu et al. fail to teach the thickness of the first insulation, it would also be obvious matter of design choice to provide a desired thickness of the first insulation. Therefore, it would have been an obvious matter of design choice to modify the insulation material or the thickness of Shimizu et al. to obtain the invention as specified in claims 8 and 10.

12. Claims 9 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. or Akin, Jr. et al. or Shiraishi et al.

Akin, Jr. et al. teach all of the limitations as set forth above except the forming process for the first (as per claim 9) or the second insulation material (as per claim 14).

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Shimizu et al. teach that the insulation material is deposited and Akin, Jr. et al. teach that the second insulation layer (70) is formed any suitable method (col. 7, lines 21-24). Since the deposition processes of the insulation material for the electrical device as recited in the claimed invention are old and well known and commonly used for manufacturing the electrical device such as the desk drive suspension, it would have been an obvious to modify depositing the first or the second insulation material of Shimizu et al. or Akin, Jr. al. or Shiraishi et al. by the deposition processes of the insulation material as recited in the claimed invention, which is well known in the art, in order to be art recognized equivalents.

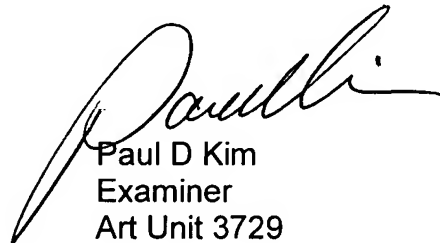
Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D. Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Friday between 6:00 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim
Examiner
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